

ED 027 651

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EC 002 475

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Demonstration Center-Part One, Secondary School Programs for Gifted Students in English, Social Science, Mathematics and Science (The Demonstration Project for Gifted Children). Final Report.

Illinois Univ., Urbana.

Spons Agency-Office of Education (DHEW), Washington, D.C. Bureau of Research.

Report No-P-D-076

Bureau No-BR-5-0656

Pub Date Oct 67

Contract-OEC-3-10-101

Note-63p.

EDRS Price MF-\$0.50 HC-\$3.25

Descriptors-Administration, Administrative Personnel, Demonstration Centers, *Demonstrations (Educational), English, *Exceptional Child Research, *Gifted, Information Dissemination, *Inservice Teacher Education, Instructional Materials, Mathematics, Professional Training, Program Evaluation, School Visitation, Sciences, Social Studies, State Federal Support, *State Programs, Summer Institutes, Teaching Methods

A study of demonstration as a technique in disseminating new materials and methods for educating gifted youth, the project was begun in April of 1963 and terminated December 31, 1966. Demonstration centers were established in nine Illinois school districts: seven in mathematics, five in social studies, three in English, and two in science. The gifted children participating in these demonstrations during the 1966-67 academic year totaled an estimated 22,810. Through 1967, an estimated 10,300 teachers had visited the 23 demonstration centers established in 1964-65. As the project evolved, a demonstration director was employed, and the coordinator acted as a liaison between the state and federal projects. Two-hundred-forty prospective demonstration teachers were given special summer training; and followup services for teachers, including inservice training, were intensified. Administrators were given instruction in conducting inservice programs. While many Illinois teachers were aware that the demonstrations existed, knowledge of their purpose and significant components was not evidenced although legitimacy of the methods and curriculum was often confirmed by visitors interviewing students in the program. (BB)

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MAY 14 1968

FINAL REPORT

Project No. D 076
Contract No. OEC-3-10-101

DEMONSTRATION CENTER-PART ONE, SECONDARY SCHOOL
PROGRAMS FOR GIFTED STUDENTS IN ENGLISH,
SOCIAL SCIENCE, MATHEMATICS
AND SCIENCE

(The Demonstration Project For Gifted Children)

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October 1967

The research reported herein was performed pursuant to a contract with the
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U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

Office of Education
Bureau of Research

ED 0027651

EC 002476

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I.

OVERVIEW

A. Purpose and Plan

Originally, the Demonstration Project for Gifted Children was undertaken as a pilot study of demonstration as a technique to disseminate materials and procedures being developed for educating gifted youth. The focus of the project became the development of a feasible program that would serve as a model for a multi-million dollar program in the State of Illinois. To mount the project, curriculum materials and methods, developed at the University of Illinois Laboratory School, were used in typical classes for gifted students throughout the state; and visitors were invited to observe the teaching and accelerated learning in these classrooms.

As the pilot project evolved, inherent problems necessitated modifications: the financial base was broadened, the role of demonstration director created, follow-up services for teachers (including inservice training) were expanded and intensified.

B. Scope

The Demonstration Project for Gifted Children began April 15, 1963 and formally terminated December 31, 1966.

All school districts in Illinois were invited to participate; and among the 17 districts responding affirmatively, nine were accepted. Since several centers demonstrated more than one curriculum area, the final complement included: seven in mathematics, five in social studies, three in English, two in science.

In the summer of 1964, 120 potential demonstration teachers were given eight weeks of training; and in 1965, 120 teachers attended a similar session. During a summer program in 1966, administrators and other personnel were trained to conduct inservice training programs, which had become an important element in the original demonstration concept.

During the academic year, 1964-1965, 1300 visitors observed classes at demonstration centers; 2300, in 1965-1966; 6700, in 1966-1967. These estimated totals represent the number recorded at 23 demonstration centers established in 1964-1965.

The number of gifted children enrolled in demonstration center classes in the respective curriculum areas during the academic year, 1966-1967 included: 20,000 in mathematics, 2300 in social studies, 300 in English, 210 in science. Because the projects in English and science never were independently funded, materials were not sufficiently developed to warrant extensive dissemination.

The coordinator of the project, who also served as the informal director of the state demonstration project, executed the liaison between the state program and federal project.

C. Evaluation

Because the project primarily encompassed a study of feasibility, no dimensional design for its evaluation was incorporated. However, at the conclusion of the project, three doctoral dissertations were being written and several other studies undertaken to assess its significance.

To determine the direction and development of the original concept, the project continuously evaluated itself. This informal process soon indicated the following needs: development of the role of a demonstration center director; elaboration of a theoretical rationale identifying awareness, legitimatization and implementation as major goals of demonstration; measurement of progress in achieving specific goals by conducting ongoing studies.

These studies showed that: awareness of the demonstrations existed; but, even within the most efficient demonstration centers, knowledge about their purpose and significant components was not evidenced.

Legitimatization often was accomplished, for the most part by visitors interviewing students in the program. (If the visitors had not been familiar with a similar classroom situation, however, these interviews might not have been as effective.)

Implementation initially was attempted through institutes at the University of Illinois. Primarily because of limited space and inadequate staffing for the institutes, the training then was done at the demonstration centers.

II.

INTRODUCTION

A. Background for the Study

Though the Demonstration Project for Gifted Youth was initiated in 1963, three trends in American education during the previous decade reflected increasing concern about the gifted student. A number of curriculum projects were undertaken; the problem of disseminating findings of educational research and research and development projects was more clearly identified; and, in Illinois, a Special Study Project to investigate the need for effective legislative action to improve school programs for the gifted was begun.

1. Curriculum Projects

Sponsorship of projects to study and change educational practices affecting the gifted was extensive and diverse. For example, the National Education Association conducted a Project on the Academically Talented Student; the North Central Association of Colleges and Secondary Schools initiated a regional Superior and Talented Student Project. Local and national surveys and inventories were designed to assess talent development programs. Corporations began underwriting programs to search out and reward gifted young people. Curriculum projects aimed at producing instructional materials suitable for academically talented students were also begun. Ultimately, four such projects of the University of Illinois were incorporated in the Demonstration Project for Gifted Youth.

The pioneer project during the school year, 1951-1952 was the work of the University of Illinois Committee on School Mathematics (UICSM). In 1959, the staff of University High School (the experimental school at the Urbana campus of the University of Illinois) initiated an English Curriculum Project. In 1961, a Social Studies Basic Curriculum Study was begun at the experimental school and in 1962 preliminary work on a Junior High School Science Project started. Though these curriculum projects were in different stages of development in 1962-63, they exhibited common elements: (a) an emphasis on inductive teaching and learning through discovery, (b) materials ready or nearly ready to use at the junior high school level, (c) a recognition that teachers would need special help in learning to use these materials, and (d) a need for field-testing and dissemination activities that would require the cooperation of public schools. These mutual elements structured both the initial plan and subsequent development of the Demonstration Project.

2. Concern for Dissemination

Innovation and change in education became subjects of extensive discussion and study in the early 1960's. David L. Clark, then director of the Cooperative Research Program of the USOE, was particularly concerned about the failure of educational research to influence educational practice. Several unsuccessful dissemination projects and Henry M. Brickell's study of educational change in New York State convinced Clark that:

The existing programs of the United States Office of Education and the state departments of education in the processes of disseminating and implementing education research are so inadequate and ineffective as to be nearly useless for discussion purposes except as examples of what should not be done.

Drawing upon research in innovation in agriculture and upon Brickell's findings, Clark stressed that the translation of educational research into practice was a much more complex process than anyone imagined. Five steps were required: basic research, investigation of educationally oriented problems, classroom experimentation, field testing, and demonstration and dissemination. Clark proposed that:

...the federal government and the states completely re-think their responsibilities in the dissemination and implementation of educational research findings and establish cooperative programs which will result in a nation wide network of experimentation and demonstration centers employing the best that is known about the ways in which change in practice can be effected.

At first, nothing was done about Clark's idea. However, in November, 1962, the USOE solicited proposals to demonstrate curriculum materials and teaching techniques which could be used to benefit talented students. In response to this invitation, the proposal for the Demonstration Project for Gifted Youth was developed.

3. Illinois Special Study Project for Gifted Children

Following a recommendation of the School Problems Committee, the Illinois General Assembly appropriated \$150,000 in 1959 for a

two-year study to examine the need for a statewide program to improve services for gifted youth. The Superintendent of Public Instruction, State of Illinois, appointed an Advisory Committee to organize and direct the Special Study Project. Committee members included school administrators, personnel trained and experienced in special education, representatives of the Office of the Superintendent of Public Instruction, and university professors. In 1959-60 the Advisory Committee employed a Project Director, contracted for a review of research on programs for the gifted, carried out a statewide survey of existing programs for the gifted, and approved several study projects to be carried out by local districts the following year. In 1960-61 (a two-year extension of the Special Study Project had been secured) a research consultant was employed to oversee and assist the study projects. In 1961-62 some special studies were continued and new ones undertaken.

As the Study Project developed, four basic principles of State action emerged:

Principle I. Gifted children exist within all levels of society, within all racial and ethnic groups, and they come from every kind of home. Any programs to develop their talents must be concerned with their diversity. Among the differences which vitally affect program development are those between elementary and secondary schools, rural and urban settings, and gifted children whose school achievement is high and gifted children whose school achievement is low.

Principle II. A state plan must take into account the ways in which innovation occurs in schools. Brickell's study of innovation in the schools of New York State indicates that journal articles, convention speeches, and research reports are less influential in fostering change than the practitioner's visit to a school in which the changes have been programmed and put into operation.

Principle III. The General Assembly has delegated major responsibility for the operation of schools to local boards of education. In recommending state actions the Office of the Superintendent of Public Instruction does not intend to displace or discourage local initiative. It would like to extend the potential options for local districts in providing for their gifted children.

Principle IV. Research on gifted children has been conducted for more than forty years. Educators now know more than enough to support extensive and more adequate programs for gifted children. Yet our current knowledge and best efforts will be modified as research in this area continues at an accelerated pace. Thus state action, though necessary, must be flexible and must not impose rigid formulas and detailed prescriptions. Study and experimentation should continue with state support so that improvement may be continuous and responsive to new scientific findings.

In 1962 the Advisory Committee devised a unique plan which

synthesized these principles, the conclusions of a review of research and the findings of special studies. In its final form the plan--later known as the Illinois Plan for Program Development for Gifted Children--consisted of five complementary approaches to improving local programs for the gifted. Part I provided a formula for partial reimbursement to local schools for the extra costs of operating programs for the gifted; these costs included special books and materials as well as the costs of specially trained personnel. (The creation of several training programs, including academic year institutes, summer institutes, and in-service training programs.) Part II provided for the establishment of approximately twenty regional demonstration centers to provide operating models of various approaches to the education of gifted children. Part III provided state support for experimental projects to advance knowledge of education for the gifted. Part IV provided for the establishment of a small state staff to coordinate the entire program and to render consultant services.

In the spring of 1963, the Illinois General Assembly unanimously voted for the proposed plan. The Assembly provided a two-year appropriation of \$6,750,000, distributed as follows.

Reimbursement for Services & Materials	\$4,000,000
Demonstration Centers	1,300,000
State Staff	300,000
Experimental Projects	450,000
Training Programs	<u>700,000</u>
	\$6,750,000

The appropriation for demonstration centers, unprecedented in the nation, would later substantially affect the implementation of the federally supported Demonstration Project for Gifted Youth.

The 1967-69 appropriations for the various parts of the Illinois Plan are as follows:

Reimbursement to Local Schools	\$5,100,000
Demonstration Centers	1,800,000
Experimental Projects	575,000
State Staff (Administration and Consultants)	650,000
Training Programs	<u>875,000</u>
	\$9,000,000

4. Proposal for the Demonstration Project for Gifted Youth (DPGY)

In response to the U. S. Office of Education's request for demonstration projects focused on the gifted, the University of Illinois submitted a proposal "to demonstrate methods by which programs in English, the social sciences, mathematics and science for gifted students can be developed in secondary schools." University curriculum projects in these four areas were ready for demonstration in grade seven. Approximately five schools, diverse in size, wealth, and geographic location, were to be selected for participation in the project. University consultants would assist the schools in adopting the identification techniques, evaluation techniques, and instructional materials developed in the University curriculum projects. In-service training techniques would also be demonstrated.

Once the new curricula had been successfully installed in the

cooperating schools, these schools would serve as demonstration centers. Visitors could see innovations in operation; specially prepared films would acquaint visitors with the curriculum projects. Data from follow-up studies would be made available to help visitors assess the outcome of demonstrations. The facilities of the Office of the Superintendent of Public Instruction would be used to assist in the dissemination phase. Recognizing the pending legislation in Illinois (the Illinois Plan had not yet been enacted), the proposal noted that the Demonstration Project could contribute to the development of the Illinois Plan. Thus the resources of the University, the federal government, and the state department of education would be combined in a common effort to develop widespread awareness of programs for the gifted.

The DPGY proposal was accepted by the USOE. The Cooperative Research Project received a three-year federal grant of \$203,340, most of which was to be used in supporting the activities of the field consultants who would help the cooperating demonstration schools incorporate the University curriculum projects. The project began on April 15, 1963 and ended on December 31, 1966.

B. Rationale for Demonstration Centers

Since its inception, American education has drawn critical fire from those who, for one reason or another, feel it is not fulfilling its role and commitment to American society. Educators are held accountable for the curricular content and pedagogical techniques they develop and implement. In the 1950's when the USSR stunned the American people with its first Sputnik and other technological achievements, American educators were indicted for their apparent failure to equal or surpass the Russians in educating the nation's youth.

Among the expressed fears and doubts about American education, its purpose and quality disturbed people most. Vice Admiral Hyman G. Rickover, USN, for example, publicly charged that educators had failed to motivate and provide students with the opportunity to develop their minds and achieve excellence.

The admiral (who had planned and directed the construction of the world's first atomic-powered ship, the submarine Nautilus) and other reputable critics posed some legitimate and provocative questions. Why weren't schools intellectually challenging bright and talented students? How many of these gifted students dropped out of school or could not afford to attend college? Why were curricula, particularly in the sciences, so obsolete? Were teachers not being trained to comprehend and effectively teach students to understand and deal with contemporary problems and issues?

Much of the criticism was valid. Curricula needed to be revised. New methods had to be devised in order that educators, as well as their students, could acquire and assimilate rapidly accruing

knowledge, particularly scientific. Even though the notion that American schools were inferior to their Russian counterparts was fallacious, this apprehension did stimulate public interest in educational innovations and experiments.

Before the educators could develop innovative ways to effectively transmit this exploding knowledge, they needed to define what "education" should be and do. Should learning be a process of discovery or merely memorization by rote? Should students be motivated and taught how to explore and discover relationships? If students acquired not only basic skills but the desire and ability to independently probe and learn about their environment, would they not be prepared to cope with complex and unknown elements in their world?

Some program had to be conceived to inform teachers about new curriculum projects and show teachers how to teach the gifted students whose intellectual maturity these projects were being designed to develop. The demonstration center seemed a practical way of accomplishing this dual purpose.

By visiting a demonstration center, a teacher could observe methods and talk with the teachers and students actually involved in and experiencing new curricula. This experience would renew the observer's interest in learning and improve his teaching because he would see and understand how teaching and learning happen. And, for the first time in education, this method of diffusion by demonstration would be tried on an extensive and large scale.

The demonstration center also seemed an ideal solution to the problem of applying research findings concerning human behavior and, in particular, how and why individuals learn. For unless a student's mind is stimulated and responsible behavior encouraged, his educational experience will be foreshortened and impoverished. Thus, the demonstration center also functions as a demonstration "change agent" to help schools improve the quality of their existing procedures and programs.

Thus far, rural sociologists have conducted the most studies about diffusing new ideas and have successfully applied the results of these studies to the dissemination and acceptance of innovative techniques. In the 1940's, studies about the spread of hybrid seed corn sparked further investigation of the transmitting of agricultural innovations from scientist to farmer. These studies were so well planned that their recommendations could be widely adopted as practices, and these improved methods of diffusing new ideas greatly increased productivity for the individual farmer.

Educational research has not influenced its field in such dramatic or effective ways. Perhaps the results of studies are less widely publicized or perhaps they are less persuasive or practical than their agricultural counterparts, but something is lacking. Most diffusion studies in education were performed at Columbia University Teachers' College, under the sponsorship of Paul Mort; more recently a major effort was undertaken by the Center for Advanced Study in Educational Administration, University of Oregon. Although these earlier diffusion studies were well-known within the field of educational research, actual application of the results had not been made in school programming and practice.

If research is to foster change in education, its results must not only be valid but communicated to teachers in practical terms. Just as the farmer learned about and benefited from the experimental development of hybrid corn, so the teacher ought to find it easy to learn about experiments in education and be able to use the results in his classroom. Educational research must find ways to make a new program attractive and to convince principals and administrators of its immediate and practical value.

Since research indicates that the process of change is independent of the kind of change being effected, agricultural research and practices in diffusing innovations could very well serve as a model for education.

Agricultural models give the following primary steps in the diffusion of innovations:

1. Awareness. The farmer knows of a new idea but lacks information about it.
2. Interest-Information. The farmer becomes interested in the idea and seeks more information about it.
3. Evaluation-Application-Decision. The farmer mentally applies the new idea to his present situation and decides whether or not to try it.
4. Trial. The farmer uses the new practice on a small scale, if at all possible, to see if it will work on his own farm.
5. Adoption. The farmer uses the new practice on a full scale and makes it a part of his way of farming.

How quickly a farmer will adopt a new idea partially depends upon the characteristics of the idea. In making his decision, the farmer will be affected by one or more of the following factors:

1. Cost and Economic Returns. New practices that are costly tend to be adopted more slowly than less costly ones. Regardless of cost, however, practices that produce a high dollar return on investment usually are adopted more rapidly than those that yield low returns. Also, practices producing quick returns on investment tend to be adopted more rapidly than those where returns are deferred or spread over long periods.
2. Complexity. New ideas that are relatively simple to understand and use are generally accepted more quickly than more complex ones.
3. Visibility. Practices whose operation and results are easily seen or demonstrated are more quickly accepted than less evident practices.
4. Divisibility. Practices that can be tried on a sample basis or on a small scale will generally be adopted more rapidly than those that cannot be so easily proven.
5. Compatibility. A new idea which is consistent with existing ideas and beliefs will be accepted more readily than an unfamiliar or innovative concept.

Although there are many similarities between research in rural sociology and education, differences do exist. Agricultural laboratories and experiment stations make possible accurate measurements and controlled conditions for a given innovation. Education, on the other hand, has only the university schools and/or those classes in the public schools willing to cooperate in an experiment.

Wherever the class, research may not take precedence over children's needs. Because of an absence of control groups, the validity of the results often is not clear.

A second difference is the lack of an economic incentive to adopt an educational innovation. In agriculture, an innovation will result in direct economic gain, whereas the adoption of an innovation in education cannot be easily measured in economic terms. What is accomplished in the classroom seldom influences the economic level of the teacher, since teachers are usually paid either for personal educational attainment and/or length of service. There seems to be no strong profit motive for being an educational innovator.

A third and crucial difference is the lack of any specific liaison between researchers and practitioners in education. In agriculture, through a system of county agents in cooperation with the Extension Service of the universities, a link exists between the scientist and the farmer. The county agent is the "change agent". In education, all too often the school principal, who might logically be a "change agent", sees his major role as maintaining the status quo rather than promoting innovation.

The problems created by these differences are not insurmountable. Certainly there is more awareness today of the need for dynamic educational change and with that awareness has come some use of the methods of diffusing innovation which have characterized the improvement of agriculture. The Demonstration Centers Program has accelerated the development of more adequate programs to develop talent and, in this respect, the centers can be considered

"change agents". The program, however, is only one solution among many for only a comprehensive approach can effect the changes that contemporary issues and times imply and impose.

III. DEVELOPMENT OF THE DEMONSTRATION PROJECT FOR GIFTED YOUTH (DPGY)

A demonstration center as a change agent in education should serve as a visible model of curriculum revision synthesizing research and the needs of children and benefiting the public. Its program should include observing teaching behavior in the classroom, developing materials to aid the teacher, and implementing procedures such as identification, scheduling, inservice training, and community relations.

A. Major Tasks of the DPGY

The major tasks in establishing demonstration centers as change agents were:

1. Acquaint as many people as possible, both educators and other citizens, with the ways in which the needs of gifted and talented youth can be met through organized programs in the schools.
2. Establish as many demonstration centers as possible within the limits of available resources. (It was anticipated that five such centers could be established within the limits of this proposal.) The centers were to be selected on the basis of the following criteria:
 - a. The selected schools should be diverse in size, resources, and location.
 - b. The selected schools should not be those which have sought widespread recognition for unusual or experimental programs.
 - c. The selected schools must be willing to commit resources to the training program that would help establish the practices demonstrated by the University of Illinois.
3. Demonstrate in the selected schools with films, tape recordings, and demonstration classes the curriculum materials and techniques

created and practiced at the University of Illinois High School. Give consulting service to help implement these practices in such key areas as identification, grading procedures, procuring materials and teaching techniques.

4. Continue preparation of films and other materials that would help acquaint teachers, administrators, board members and others with the new curriculum programs. Visits to the University High School and to the selected schools would also be made.
5. Conduct follow-up studies to help indicate to participants and observers resultant changes, including:
 - a. Evaluation of the program by students.
 - b. Testing, using instruments specially designed to measure the objectives of the new programs.
 - c. Visits among schools with demonstration centers by the teachers and administrators who are participating.
 - d. A one or two-day annual meeting of the participants.

During its three-year existence the Demonstration Project underwent some substantial changes in concept and operation. The demonstration idea--nebulous in 1963--was considerably revised and expanded as indicated in subsequent pages of this report.

B. DPGY Demonstration Centers

Research on disseminating information in agriculture stressed the importance of establishing demonstrations in places resembling those the people to be convinced recognized. Moreover, in his report "Organizing New York State for Educational Change," H. M. Brickell stated:

The most effective way to convince a school staff that it should adopt a new program is to let it observe the successful new program in action. Nothing persuades like a visit. Written descriptions of the new program, speeches about it and research reports concerning it should all be regarded as preliminary or supplementary to a visit.

The innovation must be demonstrated under conditions which are not abnormal, artificial or unrealistic--that is, not too different from the everyday circumstances in the observer's own school and community.

Accordingly, the DPGY staff reasoned that demonstration is "light-house" schools, e.g., university laboratory schools and wealthy suburban districts, would have little impact on the majority of school districts. Demonstration centers would have to be located in ordinary school districts.

The first problem of the project staff was to identify such districts and to secure their cooperation. Invited representatives from thirty-one Illinois junior and senior high schools attended a statewide conference at University High School on April 18, 1963. The conference was designed to acquaint school personnel with the curriculum projects and establish contact between DPGY staff and potential demonstration schools. The conference program included demonstration, films, and talks about the curriculum projects. At the conference, the Governor, the State Superintendent of Public Instruction, and the President of the University endorsed the Demonstration Project.

At the time, no financial incentives were offered for participation as a demonstration school. On the contrary, demonstration schools would have had to provide some released time for teachers to permit training and visitation. (It was known, however, that financial

benefits were likely if the Illinois Plan was passed.) The Demonstration Project offered participating schools (a) an opportunity to use newly developed curriculum materials, (b) consultant help in developing programs for the gifted, and (c) assistance in building community support for programs for the gifted. Apparently these incentives were sufficient; fifteen of the thirty-one schools represented at the conference indicated interest in participating in the DPGY.

Project staff members visited several of these schools. Visits included observation of teachers in the local districts, conferences with teachers and administrators, and occasional public meetings. The visits were designed to clarify for local personnel the implications of involvement in the DPGY and to enable the Project staff to assess the willingness and ability of the local districts to participate in the program. By September, 1963, nine school districts, diverse in size, wealth, location and character, had been selected to participate by developing demonstrations of one or two of the curriculum projects. University High School provided the program and acted as a consulting agency for implementing demonstration programs for gifted youth in Danville, East St. Louis, Edwardsville, Elk Grove, Marion, Metropolis, Roxana, Springfield, and Sterling.

C. Illinois Plan for Gifted Children

The DPGY received great impetus by the passage, in August, 1963, of the Illinois Plan for Program Development for Gifted Children, (S.B. 749). The primary aim of the plan was to assist and encourage local school districts to develop and improve educational programs

that would increase their educational services for gifted children. The plan includes State reimbursement for psychologists to help identify gifted children and for other personnel to work in special programs in school districts; State support for books and materials; demonstration programs in schools in various parts of the State; experimental projects to help develop practical approaches to the education of gifted children; a small State staff and State support of special training programs, such as fellowships and summer institutes, to increase the number of specially trained personnel to serve in special programs for the gifted. The State granted appropriations to the program: \$6,750,000 for 1963-65; \$7,750,000 for 1965-67; and \$9,000,000 for 1967-69.

The Illinois Plan provided funds for the establishment of demonstration centers for the education of gifted children, using one or more of the following approaches:

1. Acceleration of highly gifted pupils.
2. Individualized instruction through team teaching, non-graded plans or independent study.
3. Special classes for the highly gifted, with specially trained teachers and supervisors or consultants.
4. Special attention to gifted youth from socially and culturally underprivileged groups.
5. Curriculum improvement that develops programs emphasizing creativity, divergent thinking, and similar complex mental processes.
6. Special attention to the emotional and social adjustment of gifted pupils.

Under the Illinois Plan, a demonstration center program involves either a complete school district or selected grade levels, subject areas or individual schools. Each demonstration center has the following characteristics:

1. It exemplifies one or more of the six approaches listed above.
2. It provides retainment systematic evaluation with published results, and makes these results available to visitors on request.
3. It is open to visitors and establishes regular procedures for inviting them and explaining the program to them. Visitors may visit classes and talk informally with teachers and pupils. They then have the opportunity to seek whatever additional information they desire.
4. Each demonstration center is the responsibility of a full-time professional staff member of the local district.

The Illinois Plan, approved by the time the DPGY schools had been chosen, provided for the establishment of a network of centers to demonstrate each one of the six approaches to the education of the gifted in all six regions of the State. Thus, the Illinois Plan envisioned up to thirty-six centers and established about twenty during 1963-64. Each center was to receive about \$25,000 per year to underwrite the salary of a full time demonstration director, clerical wages, pay for substitute teachers, travel, and publicity. Contractual agreements between the demonstration schools and the State governed the operation of demonstration. A State Advisory Council, charged with overall direction of the Illinois Plan, established guidelines for demonstration center proposals and selected centers on the basis

of proposals submitted.

D. Integrations of the Illinois Plan and the DPGY

For several reasons it seemed advisable to merge the DPGY with the Illinois Plan. The DPGY did not provide funds for the cooperating schools, whereas the State program provided money to enable the cooperating schools to employ directors, provide released time for demonstration teachers, secure substitute teachers, provide clerical assistance, purchase materials, and pay for travel and other expenses. On the other hand, participation in the State program complicated the original university-school relationship by adding a third party, the Office of the Superintendent of Public Instruction. The Illinois Plan, however, benefited by bringing the DPGY into the State program. The DPGY, which already had a consulting staff and a coordinator, provided services and direction to all the centers in the Illinois Plan and thus solved the problem of staffing at the State level.

In September and October, 1963, all nine of the DPGY schools prepared proposals for submission to the State Advisory Council. The DPGY staff prepared an "umbrella proposal" describing the background and objectives of the DPGY. The Advisory Council considered sixty-five demonstration proposals and accepted twenty-six, including all nine of the proposals from the DPGY schools.

Some important differences existed between the nine schools affiliated with the DPGY and the seventeen that were not. The DPGY schools were demonstrating only four programs, at just two grade levels. In contrast, the other schools were demonstrating programs far less

homogeneous: the programs operated at all grade levels and included such diverse approaches as Advanced Placement, independent study, acceleration, group counseling, creativity projects, and programs for underachievers. The DPGY schools were generally smaller, less wealthy, and less innovative than the others. Many of the non-DPGY schools were used to visitors, whereas the DPGY centers had to create their demonstrations before they could accept visitors. Moreover, the two groups of schools initially had different expectations about the role of staff consultants. The DPGY schools expected extensive assistance from university consultants; however, these schools had not anticipated that the state education agency would become a controlling force in the program. The other schools expected to operate on a contractual relationship with the Office of the Superintendent of Public Instruction as initially they had not known that consultants from the University of Illinois would be playing a prominent part in the direction of the State program.

During 1963-64, the different problems and preconceptions of the two groups of schools led to some uncertainties. The DPGY schools had to figure out how to relate to the University staff. During 1964-65, most of these uncertainties were either resolved or minimized by growing feelings of communality among the centers. The centers had some common problems, e.g. dealing with visitors, improving the demonstration classes, dealing with the State; and as demonstration center personnel shared these common problems at meetings, they developed feelings of rapport. The staff deliberately fostered the development of this group feeling and took steps to eliminate distinctions between "the university staff" and the "state staff". The

restructured DPGY staff included fewer University High School teachers and the State office added staff not affiliated with the University. In addition, increasingly widespread respect for the project coordinator and a shift in emphasis from demonstrating curriculum to demonstrating program improvement techniques helped integrate the two programs.

By the end of 1965-66, the program under the auspices of the Office of the Superintendent of Public Instruction had become so self-sustaining that the DPGY no longer needed to be so directly involved. The State office staff and the State consultants--many of them recruited from the demonstration centers--provided direction for the State demonstration project. Strong directors had emerged in several of the centers needing far less assistance than in the early stages of the program.

E. Selection of Teachers

Teachers in the program were local classroom teachers. Faculty consultants from University High School visited the prospective school to explore the possibilities of a cooperative agreement. At that time those who would be directly involved met each other. Individual teacher selection was based on the consultant's subjective prediction of mutually satisfactory cooperation.

Teachers in the Demonstration Centers received special inservice and workshop training in the methods to be used in the various subject matter areas.

The participating teachers initially received no extra pay, but were allotted time for curriculum planning, review, and internal communication. Later, most received \$300 - \$500 above their salary schedule.

F. Selection of Students (Identification)

Generally the children included were those considered academically talented or gifted, having aptitudes or special abilities determined by typical standardized measurement instruments and concepts of ability, particularly those supported by Title V, NDEA. Initially group intelligence and group achievement tests and teacher judgment were used to identify these students. Additional methods of identification depended on policies within the local school district.

Since individual talent manifests itself in different ways, consultants wanted to include students not ordinarily identified as gifted. Most programs had been limited to academically gifted children, selected by their scores on standardized group tests, their grades, or other means. However, students who were creative thinkers or group leaders who inspired students' trust and motivated their peers' constructive performance, as well as underachievers (depending upon the identification procedures), might be included.

G. What Should Be Demonstrated

The third and perhaps most difficult task faced by the DPGY was to clarify and refine what was being demonstrated. Conceptions about what visitors could and should see changed substantially during the duration of the project.

Initially, the emphasis was on curriculum materials. The models were built from the University High School curriculum projects in English, social studies, mathematics (UICSM) and science. Visitors were expected to observe the use of the materials in regular classroom settings, recognize that gifted students were responding positively to the materials, and conclude that these or similar materials should be adopted in the visitors' schools.

In retrospect, such expectations seem as logical as previous reliance on text books, lectures, research reports, teachers' institutes to effect educational change. Nevertheless, the assumptions proved quite invalid because they had been based on overestimations of visitors' receptiveness, flexibility and influence. Visitors, tending to concentrate on the familiar and ignore the unfamiliar aspects, overlooked unique features of the materials being demonstrated. This initial focus on curriculum materials also precluded the visitors' observations of the demonstration teachers' behavior which became more and more significant. Finally, the original expectations had been predicated on the false assumption that visitors would be able to appreciably affect curriculum decisions in their own schools.

Recognition that these initial assumptions were unreliable determined revised concepts about what was to be demonstrated. One revision shifted the emphasis from a curriculum as a whole to significant elements within it. Thus, in social studies attention was redirected from the uniqueness of a unit on the family to the unit's techniques for fostering divergent thinking, evaluative mental

operations, and independent modes of inquiry. Recommendations to demonstration center staffs suggested that they identify the significant elements of their demonstration programs and direct the visitors' attention to these elements. Consequently, instead of following the initial idea that visitors should be allowed to browse in open demonstration centers, the demonstrators tried to focus visitors' perceptions. This shift proved to be exceptionally difficult to implement because demonstration center staff found it difficult to adequately analyze their programs.

Another revision shifted the emphasis to the development rather than presentation of programs for the gifted. In this context, visitors could learn how to create and design such programs even though, at that point, they did not wish to adopt the program in their own school. In this context, the DPGY also was more accurately depicted as demonstrating a curriculum still in the process of development rather than one which had been completed. This shifted emphasis also complemented the overall emphasis of the Illinois Plan which stressed the importance of program growth and improvement. Consequently, demonstration center staff began to direct visitors' attention to programs and techniques for inservice training.

A third shift in emphasis reflected a developing interest in teacher self-assessment techniques. The Special Study Projects for Gifted Children, which preceded the enactment of the Illinois Plan, quite clearly indicated that even when teachers use specialized materials for special groups of students, their behavior changes very little. Therefore, a teacher's behavior could easily nullify

the curriculum writer's efforts to produce materials fostering complex thought processes or divergent thinking or independence. However, the special studies also suggested that when teachers examined their own behavior, changes were likely to occur. Several centers then began to experiment with demonstrations of self-assessment techniques. Demonstration teachers discussed their own self-assessment techniques with visitors.

Finally, it seemed sensible to place less emphasis on conducting studies evaluating the effects of the university curricula. Consequently there was very little data for visitors to examine; but they, of course, were encouraged to informally evaluate the effects by interviewing the students.

H. Demonstration Techniques

A major task of the Demonstration Project for Gifted Youth has been to develop techniques of demonstration. Initial naivete about the content of demonstration paralleled a lack of knowledge about the process of demonstration. In fact, the DPGY proposal virtually excluded demonstration techniques except to note that the program's purpose was to develop "awareness" through demonstration and the use of mass media. By and large, the DPGY proposal concentrated upon the process of disseminating the curriculum projects to the cooperating schools and not, conversely, from these schools to others. Emphasis on demonstration came from the Illinois Plan, for which appropriations had been estimated to assure that large numbers of visitors could see the new programs in action.

Five basic components of the demonstration process which had to be identified and conceptualized included: solicitation of visitors, orientation of visitors, classroom observation, interviews with students, follow-up services.

1. Solicitation of Visitors

In most of the DPGY centers, visiting was not encouraged in 1963-64. As the schools were developing their demonstration programs, visitation would have been premature. However, by 1964-65 it was clear that the State would want some indication of return on its investments in demonstration centers and the number of visitors seemed the most obvious measure of "success". However, experience in some of the non-DPGY centers the previous year indicated that visitors would come only if invited. The problem of attracting visitors was particularly acute in the more remote and less known demonstration schools.

Several solicitation techniques were devised. The Office of the Superintendent of Public Instruction published and distributed a brochure giving details about each of the demonstrations. Each center published and distributed its more specific brochure. Demonstration directors addressed professional meetings, sent personal invitations to nearby schools, and prepared news releases. These efforts produced a substantial number of visitors in 1964-65, though visitors were still unevenly distributed among the centers. In 1965-66, an even more successful procedure attracted visitors to the DPGY centers: small school districts could qualify for reimbursement funds under the Illinois Plan if, among

other things, they offered an inservice program which included a visit to a demonstration center. These various solicitation techniques were so successful that by the end of the third year most of the centers found it necessary to impose limitations upon the number of visitors they accepted.

2. Orientation of Visitors

Most visits were scheduled for a full day, though one or two centers attempted to induce visitors to stay for two days. Whatever the length of the visit, it started with an orientation session involving the visitor, the demonstration director, and sometimes the demonstration teachers or even the building principal. At first, orientation sessions were designed to provide the visitor with background information about the curriculum materials and the selection of students in the demonstration classes. In later months, the orientation sessions were more extensively devoted to test questions, sample teaching materials, video tapes and visual aids to direct visitors' attention to the significant elements of the demonstration program.

3. Classroom Observation

From the beginning, the DPGY viewed classroom observation as the key to the visitation process. Only in the classroom can the visitor actually see the innovation and observe the students' reaction to it. The entire concept of the demonstration project originated in the significance of this experience. Somewhat surprisingly, perhaps, demonstration teachers have reacted well

to having frequent visitors in their classrooms. Many claim that both their teaching and the students' responses improve when visitors are present. Nevertheless, the limitations of classroom observation have become quite evident. Sometimes, innovative lessons do not activate. Inevitably, there are some days when the demonstration teacher must perform routine rather than innovative activities. Sometimes, visitors are familiar with the techniques being demonstrated. And some visitors, no matter how well oriented, fail to perceive the significant features of what is being demonstrated.

4. Visitor-Student Interviews

Visitors' attitudes were affected by interviews they had with students. Brickell's work suggests that teachers assess new practices in terms of students' responses to them, and the demonstration centers gave visitors a chance to ask students about the program. Student opinions were particularly useful because at most demonstration centers objective measures of the results were unavailable. The DPGY staff worked hard to persuade demonstration teachers to allow visitors to interview students confidentially. At first many teachers were reluctant about this procedure, though in time all accepted though few welcomed the idea. In practice, some visitors did not wish to interview students: either they were content with observing student reactions in the classroom or else uneasy about the idea of visitor-student interviews. However, many visitors did avail themselves of the opportunity. In these cases, the interviews often greatly influenced the visitors' attitudes toward the innovation being demonstrated.

5. Follow-up Visits by Demonstration Directors

The most significant change in demonstration techniques added a new dimension to the role of the demonstration center. At first, centers were viewed as places where visitors could view innovative programs but becoming aware of an innovation did not necessarily lead to changes in school programs. Since the Illinois Plan provided funds for reimbursement and training, the demonstration centers began to help nearby schools use these resources for program development. Demonstration directors now spend up to one-third of their time outside their own district. They help other districts in whatever ways they can such as securing state funds under the various titles of the Illinois Plan or establishing or operating inservice training programs. In reality, the demonstration directors really function as state consultants. In the summer of 1966, the Centers' service was considerably expanded: several demonstration centers offered their own summer institute programs built around their programs; another team of directors conducted brief training programs in various school districts.

I. Training

At the outset, the DPGY realized that demonstration teachers would need some training in the use of university curriculum materials and assumed that university consultants during monthly visits to cooperating schools would be able to meet this need. However, training some 150 people, selected and recruited to serve as demonstration teachers and other essential personnel, necessitated more extensive and effective training than a few consultants could provide.

Initially, the need to train demonstration directors was not fully identified. As this role evolved, however, it became evident that the directors needed expert knowledge in curriculum, development, evaluation, inservice training, human relations, and the total operation of the Illinois Plan.

1. Training Programs

Eventually, four types of training programs were developed. In the first type, outlined in the original DPGY proposal, the DPGY staff made periodic one-day visits to the cooperating schools. These visits provided opportunities to render first aid, to assess progress, to maintain morale, and to identify problems requiring special treatment. However, during these necessarily irregular and infrequent visits, the staff could not conduct an effective and formal training program.

In the second type of training program, a series of regional inservice training institutes meeting one day a week for several weeks were held in many demonstration centers. Not only demonstration teachers but others from the center and nearby schools attended the formally structured sessions which became an effective method of dissemination as well as training program.

In the third type of training program, all demonstration personnel attended two two-day sessions conducted by the DPGY staff. During the first session, major elements of the demonstration program were presented and discussed; at

the second, a model demonstration situation was projected by a demonstration director, demonstration teachers, gifted students and visitors. (This training scheme first was followed in November, 1963 and January, 1964.) Observation and discussion of that model demonstration generated and structured many ideas and techniques that ultimately were developed and used.

During 1964-65, a series of eight two-day meetings, held at a demonstration center, were arranged for demonstration directors. The first day, the directors observed the center's demonstration program and techniques. The second day was devoted to some formally structured training program. These two-day sessions proved most productive. The participants acquired many ideas and practical knowledge about directing demonstration programs. No less beneficial was their opportunity to bolster morale by sharing problems and developing a sense of group identity and support. For those experiencing severe role conflict problems, this was particularly reassuring.

During 1965-66, the directors had two major statewide meetings. At the first meeting (a one-week retreat) the directors, after a year or more of intensive training, asserted themselves and began taking a major part in shaping the future development of the demonstration program. For example, a demonstration director conceived the idea of establishing traveling teams of directors to conduct brief training programs in districts during the summer. The second major meeting of 1965-66, a

three-day conference of representatives of several state departments of education, examined the implications of the demonstration idea for other states.

2. Summer Institutes

The fourth type of training program, the annual summer institutes financed by the Illinois Plan, was aimed specifically at the needs of demonstration center personnel. To help meet the rapidly rising demand for specially trained personnel, the State supported summer institutes, inservice institutes held during the school year, and academic-year institutes. Policies of the National Science Foundation provided a model for participant support of these institutes: school districts, usually in cooperation with a university, conduct inservice institutes; three public universities, two private universities, and one private college have conducted academic year and summer institutes; and a fellowship program to support graduate study for persons preparing for leadership roles has been established.

Four essential features of the summer institutes at the University of Illinois for demonstration center personnel were:

- a. Teachers, consultants, and supervisors engaged in vigorous self-assessment of prevailing practices:

- (1) Analysis of examination questions. Teachers should know how to set tasks which sample student behavior (a) in recalling factual material, (b) in synthesizing factual material, and (c) in evaluating various kinds of material complementing the student's own frame of reference.

- (2) Analysis of student-teacher interaction. A recording of a class was made by magnetic tape. As each person observed this recorded performance, he could identify his strengths and weaknesses and decide how to change his behavior.
- (3) Student descriptions of the classroom. Students are able to judge some classroom procedure quite accurately. Studies have shown that students perceptively respond to such questions as:
- ...Does the teacher allow students to ask any kinds of questions they wish?
 - ...Does the teacher expect too much of us?
 - ...Does the teacher shame and embarrass some students?
- b. Teachers and supervisors could adapt model procedures and materials to their own use after watching demonstration class teaching and role playing and examining films, tape recordings, examination questions prepared by evaluation experts, and textbooks exemplifying a new approach.
- c. Teachers, consultants, and supervisors were given an opportunity to practice while still in the inservice program.

It takes time and a conducive climate of learning for an individual to try new ways and accept inevitable failures encountered in learning how to write and score new types of examination questions or how to

listen and react to an underachiever in a way that will help him. Continuous self-assessment and feedback are crucial components in such practice.

- d. Teachers, consultants, and supervisors needed to have opportunities to continue the processes of self-assessment after the summer institute. Such opportunities can take many forms. But whatever forms--study, reflection, self-analysis, discussion with colleagues or others--were chosen, participants were expected to reserve not less than one hour of each working day to practice them. The development and maintenance of skills learned in the summer institute and the continued pursuit of new knowledge demand a substantial time commitment.

Basic to this approach to inservice education must be a feeling of trust and confidence in the person or persons who serve as leaders. The leaders must be as willing to assess their own practices as they expect teachers to be. Teachers are likely to share their perceptions of their own work and their desires for change in their professional practice only with a leader whom they can implicitly trust. Moreover, this approach should help reduce the traditional isolation of teachers from each other as they work in separate classrooms.

3. Planning and Programming the Summer Institute, 1965

To help identify specific needs the institute should meet,
a questionnaire was sent to demonstration center personnel.

Responses from 120 recipients are summarized in the following
table.

Table 1. Needs of Demonstration Center Personnel as Expressed in Selected
Questionnaire Results

<u>Item</u>	<u>"Essential"</u> <u>Number</u>	<u>Responses</u> <u>Percent</u>
Gather evidence on student growth in		
Thinking	93	77.5
Creativeness	84	70.0
Leadership	78	65.0
Self-images	76	63.3
Classroom Procedures		
Nurture creativity	83	69.2
Set up independent study projects	78	65.0
Use "inductive" teaching	70	58.3
Work with underachievers	64	53.3
Have student-led discussion	68	56.6
Conduct seminars, small group discussions	59	49.2
Write examination questions for higher level thought processes	67	55.8
Identification		
Use data to identify underachievers	53	44.2
Utilize services of other agencies and specialized personnel	51	42.5
Identify personality and intellectual characteristics associated with creative adults	41	34.2
Evaluation		
Assemble evidence on new curriculum projects	52	43.3
Obtain measures of student perception of program	58	48.3
Inservice training		
Locate, create new models of teaching	74	61.7
Utilize procedures of self-assessment	52	43.3
Use classroom observation and teacher interchange	60	50.0
Obtain school and community support	47	39.2
Integrate services of other agencies and specialized personnel	44	36.7
Special problems		
Relate more adequately with the general curriculum program in the school district	54	45.0

Respondents indicated far more needs than could be met in one summer, but most surprising was the large number of "essential" items. More than twenty items were so regarded by one-third or more of the demonstration center personnel. At the same time, there was an evident reluctance to participate in some of the work which appeared essential to meet the needs that were rated high. For example, the "nurture creativity" item was marked essential by 69% of the respondents, but only 19% marked "analyze tape recordings" as essential. Yet, such analysis is one of the few ways for a teacher to study how his own classroom performance can nurture creativity.

The specific activities of the institute were: to train teachers to demonstrate in their classroom how to use new materials and techniques judged appropriate for gifted children; and to train demonstration center directors, supervisors, and consultants in ways to disseminate new materials and techniques through the establishment of demonstration centers and in-service training programs.

The materials were derived primarily from curriculum projects such as the UICSM Mathematics Projects and the University High School English Project. The techniques were those found useful by researchers in studying classroom dynamics. In a sense, each participant was expected to become a researcher into his own relations with students and his colleagues and thus improve his ability to compare the outcome of his own interaction with pupils and other teachers with the results of formal research and the ideals he might choose for himself.

The institute participants were divided into two major groups. The first group consisted of teachers whose primary interest was learning how to use new curriculum materials in order to become demonstration teachers in either an established demonstration center or an inservice training program.

Teachers familiar with at least one sequence of curriculum materials and more concerned about other aspects of building programs for gifted children were assigned to English, social studies, science or mathematics sections. In these respective groups, participants were prepared to function in teams composed of two or three teachers and a director or administrator to introduce major curriculum changes.

The second group examined specific approaches to many of the needs identified in the questionnaire. The approaches were developed by the participants as they worked with students. Background material was provided to help participants formulate rationales, but an attempt always was made to make each concept operational. The behavior of each participant was studied through colleague observation, tape recordings, student reactions, and video-tapes.

The following topics were considered:

- a. Use of diagnostic data, including achievement tests, sociometric descriptions, and intellectual factors.
- b. Study of classroom atmosphere favorable to divergent and evaluative thinking in discussions and written work.

- c. Classification of student productivity in discussions, written work, examinations, and non-typical academic products such as tapes produced by students and records of community work.
- d. Independent study.
- e. Study of classroom atmosphere for underachieving children.
- f. Leading discussion of controversial issues.
- g. Inductive teaching.
- h. Study materials of curriculum projects.

Members of both divisions worked together on some activities each day and all participants took advantage of the many opportunities to informally interact. As part of their practice, the members of the second division gave lectures, led discussions, and practiced other techniques of inservice work with members of the first division as their students.

Typical Week's Schedule

<u>M.W.F.</u>	<u>Tues. Thurs.</u>
8:00 Demonstration Class	Demonstration Class
9:00 Critique of Class	Critique of Class
10:00 Morning Lecture	Small Group
11:00 View Own Video-Tape (3 times in 8 weeks by each person)	-----
12:00 Noon -----	-----
1:00 Afternoon Lecture	Study of Individual Students
2:00 Self-Analysis of Teaching Style	" " "
3:00 Independent Study	Independent Study
4:00 " "	" "

The day began with a demonstration lesson taught by two staff members to a class of about twenty children. This lesson, based on an inductive plan from the curriculum project materials, provided a practical model of inductive teaching techniques for using materials most of the teachers would be teaching. Some of the lessons were "live" and some presented over closed-circuit television. During the last six weeks of the institute, the demonstration class of students was divided into smaller sections so that participants, who had seen a model of inductive teaching and dealt with it on a theoretical level in the lectures and small group discussion, actually could teach lessons from the new curriculum. Teachers also formed small groups in order to create a less critical atmosphere than prevails when all of the participants are observing. Small group work also provided more opportunities for each participant to teach and for the staff to give more individual attention.

This report describes only one approach to inservice education for teachers of the gifted. Many approaches must be devised. This one, nevertheless, represents a comprehensive model that participants can experiment with and adapt to the development of inservice programs in their school districts.

J. Organizational Adjustments

Working out the demonstration center concept required several administrative adjustments in the cooperating schools. The facility with which these adjustments were made varied according to the characteristics of the school system, the attitude of the administrators, and the approach used by the DPGY staff.

Perhaps the most difficult task was to understand and accept the role of the demonstration director. This unique role evolved from the expectations of local demonstration teachers, curriculum personnel, administrators, visitors from other schools, administrators in other schools, state curriculum consultants, the Office of the Superintendent of Public Instruction, and the demonstration director himself. Questions about the autonomy and authority of the directors troubled several schools; each had to work out its own solution.

Other problems which developed in several schools included providing released time for demonstration teachers, (in order that they might confer with visitors and work on improving the demonstration classes), scheduling demonstration classes at a time suitable for visitors, granting inservice training time or credit, designating demonstration center personnel, arranging special compensation for demonstration teachers, dealing with community problems created by the special status of a few classes, resolving uncertainty about financial arrangements with the state (due to delays in the legislative process), and encouraging willingness to accept the onus of continuous exposure. Other than noting that the demonstrations do affect virtually all aspects of the life of a school, it is difficult to generalize about these problems.

IV. ROLES IN THE DEMONSTRATION PROJECT FOR GIFTED YOUTH

Implementation of the DPGY project necessitated the invention of two roles, demonstration center director and project coordinator, and the modification of two existing roles, state-level consultant and demonstration teacher. In the DPGY proposal, the role of demonstration center director had not been defined or structured; the project director's role had been indicated.

A. Demonstration Center Director

Because local situations and problems greatly influence the demonstration center director's role and performance, no definitive description of the role can be given. There are, however, basic facts about his job and function that can be stated.

The director of the demonstration center is a full-time employee hired by a local board of education. The state reimburses the board for the director's salary which may range from the classroom teacher's to the principal's.

The state expects the director, who is charged with no responsibility for operating the school's regular program, to constantly improve the local demonstration program. (Initially, the director was permitted to teach part-time but his directorial commitments and activity proved so demanding that the practice was discontinued.)

Since the director exercises no formal authority in curriculum matters, he must improvise to execute his task which involves various activities. He devotes approximately a third of his time

to developing the local program. In arranging and conducting visits to the demonstration center, he expends one third of his time. This activity entails soliciting and orienting visitors, preparing their schedules, and gathering feedback from them when they complete their visit.

The director also attends regional and state meetings of Illinois Plan personnel, participates in inservice programs, and assists schools working on programs for gifted students.

During the summer, an inexperienced director attends an institute at the University of Illinois. If experienced, he joins the staff of some other institute or directs his own summer institute financed by the state.

The individual who functions in these diverse situations and deals with various people cannot easily be characterized. Skill in human relations and the ability to adapt to ambiguous or conflicting demands, however, are mandatory. Background apparently makes little difference for some directors had been classroom teachers and others, administrators.

As a group, the directors were highly mobile: only a few entirely withdrew from the program but many requested other assignments in the Illinois Plan in lieu of remaining in one demonstration center for three years. Those who withdrew tended to be more sedentary, methodical and less aggressive than the directors who remained in the program.

At the outset, the director was considered an administrator who managed the visitors' program. Soon, however, the state staff realized that many demonstration programs needed improvement and designated the director the most logical (though not necessarily the most appropriate) agent to accomplish this task. In this light, the director came to be considered an expert on curriculum who understood and explained specific elements in the demonstrated curriculum rather than merely presenting generalized comments.

During the second year of the project, the director's role began to resemble that of a state agent functioning in a local school. When the third year concluded, directors were making a significant contribution to the training aspect of the Illinois Plan by operating institutes or engaging in other training programs.

As the following itemized description indicates, a very significant by-product of the DPGY has been the emergence of this innovative role in education.

PROPOSED JOB DESCRIPTION

The director shall be responsible for:

1. Publicity about the demonstration program, either directly or through other persons or channels in the school system.
2. Arrangements for presentations at conferences, at parent and community meetings, and at school meetings, either by himself or by other persons associated with the demonstration program.

The presentations may be tape recordings, demonstrations, films, displays, or speeches.

3. Arrangements for visitors:
 - (a) Analysis of visitor desires
 - (b) Visitation (time, etc.)
 - (c) Orientation, whether done directly or by other staff
 - (d) Student interviews by visitors
 - (e) Visitor reaction
 - (f) Follow-up
4. Collection and interpretation of data:
 - (a) Exposition of identification procedures
 - (b) Teachers', students', parents', and others' perceptions of the program
 - (c) Others' perceptions of the director and of his job
 - (d) Evaluation and experimental data associated with the program
5. Exposition of the specific procedures used in the growth of the program:
 - (a) Information about training opportunities and resources available and used
 - (b) Illustrations of self-assessment procedures--tape recordings, student descriptions, colleague observation, and analysis of examination questions
 - (c) Arrangements used for released time, summer work and discussion groups
 - (d) Illustrations of community involvement--parent, teacher, and pupil discussion groups; classes for parents taught the same lessons as the students
6. The director's role primarily must be catalytic and executive. He must relate to the prevailing internal apparatus determining growth and change in the school and he should offer to assist in the procedures and to assume responsibility for inservice training that may be delegated. In this context, the director functions as:
 - (a.) Consultant for inservice training programs
 - (b.) Director of some or all of an inservice training program that expands the demonstration program or improves its quality
7. Assuming that the demonstration center should serve the surrounding schools, the director must:

- (a.) Arrange for consultation for other schools by the demonstration center's personnel
 - 1) Assessment and evaluation
 - 2) Identification
 - 3) Inservice training
- (b.) Arrange for demonstration and instruction in inservice training at other schools
 - 1) Use of new student assessment techniques
 - 2) Program assessment and evaluation
 - 3) New curriculum
 - 4) New teaching methods

In summary, the director shall be responsible for:

- A. Making the demonstration understandable to visitors through techniques such as:
 - 1. orientation sessions
 - 2. classroom visits
 - 3. interviews with students
 - 4. talks to parents and teachers
 - 5. reporting research data
- B. Helping in the development of the program by such procedures as:
 - 1. short range evaluation
 - 2. carrying on inservice training programs
- C. Giving service to other schools by:
 - 1. consultation
 - 2. instruction in inservice training programs

B. Project Coordinator

The project coordinator, as the title implies, directs and guides the implementation, development and achievement of the overall DPGY.

In this role, the coordinator's ability to discern problems and motivate personnel to effect solutions key his work and success.

(The fact that the director of the DPGY, who served on a part-time basis, primarily was responsible for administrative work at the University level reflects the significance of the coordinator's commitment and activity.)

In his role, the coordinator relates to the following groups:

1. The state Advisory Council for the Illinois Plan who expected the coordinator to relate the DPGY to the state program by guiding development of the demonstration centers and reporting their progress.
2. The consulting staff who initially relied on administrative support and eventually depended upon the coordinator to identify problems and develop training programs.
3. Personnel at the demonstration centers:
 - a. Directors sought direction and guidance.
 - b. Administrators and teachers wholly or partially accepted or totally rejected the coordinator's philosophy of teaching and stress on fully implementing the demonstration concept.

In simultaneously relating to all groups and individuals, the coordinator had to meet diverse and at times incompatible demands without deflecting or disrupting the total thrust and operation of the DPGY.

C. State-level Consultant

Originally, the consultant staff comprised five part-time field consultants in English, mathematics, science, social studies and identification, respectively. Four were to be staff members at University High School; a fifth, from the UICSM staff. Consultants were to periodically visit the cooperating schools to familiarize teachers with curriculum materials, to assist in implementing these materials, and to develop support for the program by working with administrators and community groups.

As the project evolved, it became apparent that teachers with responsibilities at University High School could not pay monthly visits to each of four or five cooperating schools located throughout the state. Travel time and inconvenience, difficulty in procuring regular substitute teachers, and the realization that such infrequent visits failed to meet local needs invalidated the original plan of visitation.

During the second and third years of the program, personnel changes significantly reduced dependence on consultants from University High School. For example, a member of the state staff assumed responsibility for consultant service in social studies. In 1964-65, a new consultant in English had no responsibilities at University High School. In 1965-66, three part-time consultants selected from staffs of demonstration centers in different regions replaced the full-time consultant in English. (This scheme, of course, could not be devised before the centers had been established.)

In mathematics, the consultant's demonstrated success may have been achieved because she was not involved in teaching and she worked with materials in published rather than developmental form.

A consultant's role, unforeseen at the inception of the DPGY, included commitment to the state Advisory Council. The necessity to renew or close demonstration center contracts in the Illinois Plan created the need to accurately assess each center's performance. To a considerable extent, curriculum consultants performed this function for the Advisory Council. (Whether this bifurcation of the consultant's role affected his relations and work with demonstration personnel has not been determined.)

D. Demonstration Teacher

Because the DPGY had been oriented to effecting change in classroom performance rather than to revising organizational structures or administrative practices, the classroom teacher played a critical role in demonstrating the kind of teaching that motivates and generates learning. Paradoxically, only an "ordinary" teacher could demonstrate innovative techniques and materials in order that their intrinsic validity--not a demonstration teacher's unique traits or style--would convince observers that what they had seen was exportable.

This "ordinary" teacher, however, had to function in an extraordinary situation:

1. Many visitors (often unannounced) observed her performance.
2. She was expected to exemplify teaching behavior.
3. She used innovative materials that had not been available in her previous experience.
4. She permitted visitors to confidentially interview her students.

Few teachers consistently fulfilled these expectations. Even such incentives as released time and an annual bonus of \$300 did not always attract acceptable teachers. Summer institute programs, which provided intensive training in the use of materials and practice in demonstration teaching, produced many qualified demonstration teachers. Even this source of supply, however, inadequately met the demand.

A. Conclusions

The project staff submits the following conclusions drawn from their individual experiences with and available studies of various elements in the Demonstration Project for Gifted Youth.

1. The concept of demonstration needs a comprehensive theoretical treatment, focusing on:
 - a. Widely different procedures are needed for visitors, depending on whether the visitor wants information, needs to have rejecting attitudes changed, or wants to learn the significant elements in order to adopt them for his school.
 - b. Visitors often are influenced by evidence that has no relationship to research data.
 - c. Demonstration can be thought of as exposing the significant elements of an innovation not only by verbal communication but by other techniques including video-tapes and films.
2. Demonstrating an innovation is essential in the communication process but much more complex than merely inviting visitors to observe a teacher working with students.
3. Demonstration should be only one among several procedures or processes that a center utilizes to effect change in educational practices.
4. Many new specialties must be created to contribute to the developmental work needed in education. The university researcher is only one of the many who are needed.

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Most of these specialists probably should not be located at or even associated with a university unless a different reward system could be established. For example, colleges of agriculture which instituted experimental stations and appointed field agents devised a feasible system.

5. Available developed ideas for special programs for gifted children are few. Almost all available ideas, materials, and procedures complement college demands for a certain type of academic performance. Almost all existing programs consist of efforts to make bright children excel at doing those things that the school values generally. Even the best efforts of the curriculum projects seem pale in comparison to what a good teacher-manager could achieve with adequate or extensive library resources.

B. Recommendations

1. Establish development and training centers where several specialties would be concentrated and the following components installed:
 - a. Enough professionals to formulate more than one point of view and value system
 - b. One half or more of the professionals on "detached service" from the schools being served by the center but remaining at the center no longer than one or two years
 - c. Continuous experimental program, labeled as such, with volunteer students who would attend the center for no more than two years

- d. Active support for the centers by universities but never under complete control of one university: a board of control ought to be made up of a broadly representative group. Financial support ought to come from universities, local districts and the state.
- 2. Invent, field test, and disseminate the new specialties needed to do development and dissemination work. To date dissemination is difficult because so few materials have been published that convert available research findings into specific educational practices that a teacher can try. Conversely, most specific studies have been translated into generalities which, though valid, do not solve the practitioner's problem. Specialties and specialists at a developmental center might include:
 - a. Script writers (translate research into new verbal behavior for professionals)
 - b. Evaluators (apply decision theory or management theory to development work)
 - c. Inservice trainers (train teachers in new skills that reflect research findings)
 - d. Catalysts (use small group procedures to help groups to start functioning more productively)
 - e. Communicators (show significant elements of a demonstrated program)
 - f. Programmers (convert problems into computer language for solution)
 - g. Simulators (create simulated critical incidents for training purposes)

3. Establish one or more developmental groups to create sophisticated and unique programs for children of varying talents. The features of such a group and its work might be:
 - a. Abandoning traditional subject distinctions for broad themes such as the population explosion, the computer age, and the use of leisure
 - b. Preparation of training programs for the teachers working with the children
 - c. Use of these experimental programs as a cutting edge for other curriculum changes
 - d. Location in urban, public school setting with all field testing done within existing classrooms
4. Encourage state and local level funding of developmental work to decrease domination by federal and commercial agencies and organizations
5. Encourage all groups wishing to immediately improve programs for talented and gifted youth to establish independent study as the best comprehensive approach presently available. However, little will come of independent study unless used with much sophistication. Such a program should include:
 - a. The use of diagnostic information which not only the professional but the student himself is taught to interpret
 - b. The use of much small-group work to help students gain the emotional maturity required for independent study
 - c. The offering of options (pace, grouping, content, evaluation, etc) according to an analysis of the individual student's needs

- d. Extensive training of teachers that concentrates on actual conferences between teacher and student
- e. Waiving traditional credits, examinations, and attendance and retaining only those criteria which outside groups impose and with which the student must deal in some fashion
- f. Enriched library and other resources for inquiry and learning